WASHINGTON STATE DEPARTMENT OF
Natural Resources

Washington State
Department of Natural Resources

HABITAT CONSERVATION PLAN

ANNUAL REPORT

including

DATA
&
DOCUMENTATION

July 1, 1998 - June 30, 1999

Fiscal Year 1999

Annual Report to the Services:

- **National Marine Fisheries Service**
- **U.S. Fish and Wildlife Service**

For the period of July 1, 1998 – June 30, 1999

Disclaimer: Portions of this report were not available in their final electronic version. In some cases, missing sections were scanned. In other cases, modified draft versions, which look slightly different from the original print versions, were substituted. Although the formatting may look different from the print version of this report, in no case were the data changed in any way.

Table of Contents

Washington State Department of Natural Resources

Habitat Conservation Plan

Annual HCP Report to the Services for FY1999

including

Data & Documentation

TABLE OF CONTENTS

General Format and Reporting Content Required by DNR-Services Agreements

[cont. TABLE OF CONTENTS]

Introduction & Accomplishments

HABITAT CONSERVATION PLAN

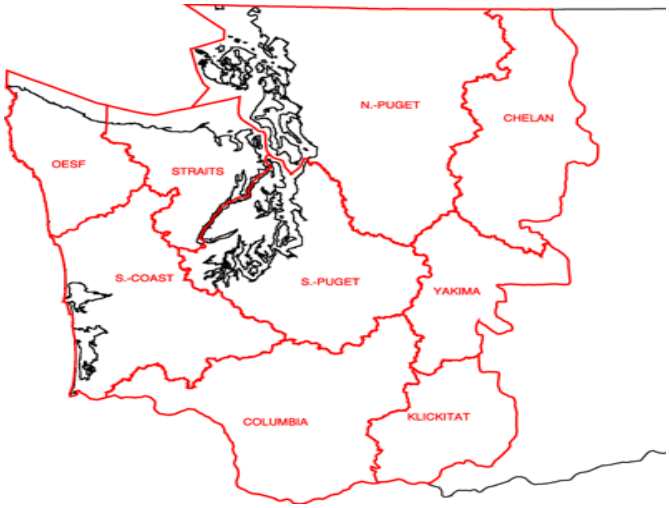
Annual Report to the Services
including
Data & Documentation

July 1, 1998 - June 30, 1999
Fiscal Year 1999

❒ INTRODUCTION

The Habitat Conservation Plan (HCP) is a forest management plan that applies to approximately 1.6 million acres of forestlands managed by the Washington State Department of Natural Resources (DNR). The HCP applies to DNR forestlands that are within the range of the northern spotted owl. In general, the area includes all DNR-managed forests west of the Cascade crest and those on the eastern slopes of the Cascades, from the Canadian border to the Columbia River. A habitat conservation plan is an approach for compliance with the Endangered Species Act (ESA) that is allowed under federal statutes. A HCP enables a landowner to comply with ESA restrictions on forest management activities by providing areas that conserve habitat for listed species. The HCP enables DNR to harvest timber with responsible, habitat preserving and enhancing forestry techniques.

❑ HABITAT CONSERVATION PLAN: PLANNING UNITS



Westside HCP planning units: Olympic Experimental State Forest, South Coast, Columbia, South Puget, North Puget and Straits

Eastside HCP planning units: Chelan, Klickitat and Yakima

[Cont. Introduction, Summary & FY1999 Accomplishments]

The Habitat Conservation Plan includes habitat management strategies for ESA listed species and for unique habitats. Some of the major provisions of the HCP are described below.

HCP Conservation Planning Strategies

- **ESA Habitats Protected:** HCP forest management practices focus primarily on habitat conservation and habitat enhancement strategies for species listed under the Endangered Species Act (ESA). DNR's habitat management plan identifies specific habitat conservation strategies and designates habitat areas for northern spotted owl, marbled murrelet and for riparian dependent species such as bull trout and salmon. The objectives and strategies of the HCP are designed to conserve and enhance habitats that are scientifically appropriate for the support of multiple species, including those listed under the federal Endangered Species Act.

- **Multiple Species Protected:** Additionally, the conservation strategies developed for the HCP were designed to provide appropriate habitat protection for many other species that are not currently listed as endangered or protected under the ESA. DNR's HCP is one of a small number of habitat conservation plans with approved ESA multi-species protection. The Department intentionally approached forest management in this manner in order to avoid future forest management interruptions due to new ESA listings that could disrupt harvest planning. In addition, the HCP provides specific habitat protection appropriate for numerous state-listed species of concern.

- **Unique Habitats Protected:** Protection of specific habitats includes identification of critical caves, talus slopes, wetlands, and nesting sites for many species. Future adaptive management changes will modify management practices to address species and habitat needs that are identified through research and monitoring. Therefore, the HCP is actually a dynamic, scientifically-based management planning tool.

❒ SUMMARY & FY1999 HCP ACCOMPLISHMENTS: July 1, 1998 to June 30 1999

FY1999 Annual Report Summary: This report covers the transition period from pre-HCP forest management practices to forest practices that are compliant with HCP commitments for all timber sales and non-timber resource sales and agreements. Specifically, as of January 1999, all approved sales and agreements complied with HCP commitments. The HCP and the associated Implementation Agreement, approved in January 1997, allowed a two-year transition planning period for developing operational guidance for the conservation strategies of the HCP. In actuality, transition planning required more time than originally anticipated. Some planning activities identified in the HCP/IA have taken longer to achieve than the HCP and Implementation Agreement (IA) anticipated. The IA is between DNR and the federal agencies responsible for ESA compliance, United States Fish & Wildlife Service (USFWS) and the National Marine Fisheries Services (NMFS). At the November 1999 DNR/Services HCP Annual Meeting, the Services stated that DNR had made significant and appropriate progress with HCP implementation.

FY1999 DNR accomplishments: Some accomplishments for this reporting period are noted below.

- All timber sales sold after December 1998 complied with new HCP commitments.
- Total timber sales volume for FY1999 was approximately the same as for FY1998,
- More forest specialists, such as biologists, advised foresters in sales preparation, ensuring HCP compliance for harvest plans.

- □ Silviculture data accuracy was field sampled and evaluated as accurate, within an acceptable variance; data verification is a HCP requirement.
- □ The Forest Resource Inventory System (FRIS) project, critical for HCP data, accelerated.
- □ New forest management and timber harvest management procedures were developed.
- □ Management and staff were trained in new ecosystem forestry techniques.
- □ Marbled murrelet research, required for murrelet management strategies, moved forward.
- □ Staff were trained on new tree retention practices to mitigate clear-cut harvests.
- □ Specialists worked with an interagency advisory group to develop riparian strategies.
- □ Engineering Division completed the physical inventory for the road management program, necessary for developing an integrated road maintenance program.
- □ Engineering Division trained staff in new road yarding techniques.
- □ New timber sales included culvert upgrading and road improvements.
- □ Public use impacts improved by re-locating campsites and replacing sanitary facilities.
- □ Numerous non-timber management proposals were evaluated for potential HCP impacts or non-compliance, such as an Olympic pipeline plan and a new hydroelectric dam.
- □ Collaborative work with the Services (USFW and NMFS) on HCP reporting requirements and operational field applications of HCP strategies continued.

New ESA listings:

□ Westside: Since the January 1997 signing of the HCP, several bull trout and salmonid species are now listed under the Endangered Species Act. Compliance with the riparian strategies identified in the HCP allows the Department to continue forest management planning without restrictions from new ESA listings. The following list identifies bull trout and salmonid species specifically covered under the Department's HCP as of the end of FY1999 (June 30, 1999).

- o Columbia River basin segment of bull trout west of the Cascade crest added to the USFW Incidental Take Permit (ITP), 1/26/99.
- o Coastal bull trout and Puget Sound segments of bull trout (effective upon any future listing) added to the USFW ITP, 4/9/99.
- o ITP was issued by National Marine Fisheries Service on 6/17/99 for: Lower Columbia R (LCR) steelhead, LCR chinook, Puget Sound chinook, Hood Canal summer-run (HCS) chum, CR chum and Ozette Lake sockeye.

SUMMARY: The HCP is a 70 to 100 year forest management plan. During the initial years of the HCP, establishing the basic foundation and planning tools for the long-range accomplishment of the habitat conservation strategies is proceeding appropriately. The forest management plan allows the Department to comply with the Endangered Species Act while providing revenue through forest management programs, such as timber harvesting. DNR forest management programs provide revenue for educational and institutional beneficiaries, as well as for the timber producing counties through DNR management of the Forest Board Trust lands.

The Department of Natural Resources is a leader in complex, large-ownership forest management. The HCP is a tool that facilitates implementation of the Department's many management responsibilities**.** Additionally, the plan allows for appropriate and flexible management changes over time. The Department is committed to the multiple goals of forest management as envisioned in the Habitat Conservation Plan.

Chap 1: Management Planning Objectives

Chapter 1 - MANAGEMENT PLANNING OBJECTIVES

The HCP was developed by the Department with the cooperation of federal agencies who are responsible for landowner compliance with the Endangered Species Act. The Endangered Species Act allows a landowner to enter a Habitat Conservation Plan agreement with designated federal agencies. The HCP and Implementation Agreement (IA) were approved by the Department and the federal agencies responsible for landowner compliance, specifically the U. S. Fish & Wildlife Service and the National Marine Fisheries Service. The HCP and IA were formally signed in January 1997, and as a result of the agreements, DNR was issued an Incidental Take Permit (ITP). The definition of "incidental take" includes actions that harass or harm identified wildlife species or cause harm to their habitat.

Under a habitat conservation plan, habitat mitigation is identified for the landowners' forest management activities that potentially impact federally listed species' habitat. The conservation strategies and related habitat mitigation that DNR developed allows the Department to continue management activities, including harvesting timber and permitting non-timber forest resources activities. The HCP permits the Department to cause incidental take of listed species in exchange for habitat preservation and enhancement in strategically identified locations. Therefore, the Department commits to certain long-range conservation strategies and long-range forest stand compositions that support species survival.

❒ HCP Conservation Strategies:

□ Northern spotted owl habitat conservation strategy

An important long-range objective of the HCP is to maintain and create appropriate spotted owl Nesting, Roosting and Foraging (NRF) areas and Dispersal areas. At this early point in the 70-year HCP planning program, habitat development trends are not observable in the field, however, future monitoring efforts will confirm progress toward the 70-year projected habitat objectives. Changes in HCP acreage in the initial years can reflect updates in inventory systems and do not necessarily reflect habitat alterations.

Baseline Comparison of Acreage in Designated Areas

FY1999 NRF & Dispersal Areas Compared to 1997 Baseline							
HCP PLANNING UNITS: ACRES							
Designated Management Acres	**Chelan**	**Columbia**	**Klickitat**	**North Puget**	**South Puget**	**Yakima**	**Total Acres**
NRF: Jan 1997	5,647	54,157	20,096	109,409	2,648	13,567	**205,524**
NRF: June FY1999	5,827	53,195	20,872	111,141	2,648	13,567	**207,250**
Dispersal: Jan 1997	0	38,645	79,095	16,068	71,492	8,332	**213,632**
Dispersal: June FY1999	0	33,634	79,094	15,391	75,370	8,332	**211,821**

Source: DNR Geographic Information System 9/99

NOTE:
- o There are no designated NRF or Dispersal management areas in the OESF, Straits or South Coast HCP Planning Units.
- o Acreage measurements are rounded and may include approximations.
- o Information is subject to appropriate adjustments and adaptive management changes over time.
- o Changes in acreage during this two year period may be due to management activities, land exchanges, or updates and refinements in inventory data.

Silviculture Management Activities in Designated NRF and Dispersal Areas

A wide variety of forest habitat conservation and enhancement objectives are achieved through silviculture activities. Silviculture management activities include many forestry activities, ranging from timber thinning and harvest methods, to subsequent site preparation and reforestation work. Management activities in riparian areas are limited at this point in time, however, activities will increase over time on a phased-in basis. Details of the activities summarized below are presented in Appendix A.

Silviculture Management Activities in Designated NRF Areas, FY 1999				
Total NRF Acres	Harvest [1]	Site Preparation [2]	Vegetation Management [3]	Other
207,250 acres	**930 acres**	**185 aces**	**1,844 acres**	**4,009 acres**

Silviculture Management Activities in Designated Dispersal Areas, FY 1999				
Total Dispersal Acres	Harvest [1]	Site Preparation [2]	Vegetation Management [3]	Other
211,821 acres	**2,100 ac**	**828 acres**	**2,364 acres**	**3,219 acres**

[1] Harvest methods during this reporting period were partial cuts and clear-cuts with appropriate leave tree retention patterns and down woody debris.
[2] Site preparation during this period included appropriate herbicide application to control undesirable vegetation prior to planting.
[3] Vegetation management includes herbicide application and hand cutting to promote young stand growth.
[4] Other activities include hand planting and pre-commercial thinnings which promote future growth.

Silviculture: The HCP required verification of silviculture information in the DNR data system. This was accomplished during 1999. The data system appropriately reflected field conditions.

□ Marbled murrelet habitat conservation strategy

The FY99 HCP murrelet program is gathering habitat data and information in order to develop a long-term conservation strategy. Potential murrelet habitat areas are deferred from harvest until habitat relationship studies are completed.

□ Riparian habitat conservation strategy

Riparian area conservation strategies contribute to salmonid habitat maintenance and restoration, and conservation of other aquatic and riparian species. DNR has not harvested in riparian areas during FY1999, except for limited acres in the Olympic Experimental State Forest. The Department is in the latter phases of developing riparian management guidelines and procedures, which will implement the HCP objectives. These guidelines and procedures are expected to complete development in late FY2000, with full implementation in FY2001. Some riparian habitat enhancement activities, such as careful thinning and vegetation management, are anticipated for FY2000.

The Olympic Experimental State Forest (OESF) is managed under distinct HCP strategies. During FY1999, riparian management activities in the OESF totaled approximately 50 acres of strategic thinning in riparian areas in order to accelerate habitat creation.

- **Multi-species habitat conservation strategy**

This habitat conservation strategy includes the objectives of the spotted owl, murrelet and riparian strategies, plus appropriate conservation management of unique habitats such as talus areas and caves in addition to conservation of specific species nesting sites or habitats areas.

Geographic objectives: The basic conservation strategies discussed above are implemented according to geographically appropriate objectives and applications, as identified below.

- Geographically distinct strategies apply in the Olympic Experimental State Forest.
- The westside planning units have multi-species protection for incidental take.
- Eastside incidental take coverage is limited to federally listed wildlife species. Riparian areas on the eastside do not have incidental take coverage for currently listed fish.

❒ **Future Forest Conditions:** The HCP is a forest management plan that preserves and creates appropriate habitats through silviculture techniques, over the course of a 70 - 100 year period. The Implementation Agreement provides for three decadal extensions of the initial 70 year agreement, thereby, creating a 100-year forest management plan. The HCP presents a significant challenge for forest managers, in that forest management activities today and tomorrow create the forests for the next generation.

FY1999 Forest Inventory: The HCP ANNUAL REPORT with DATA & DOCUMENTATION includes charts identifying age-class inventories for each region and for the Olympic Experimental State Forest. These charts also detail results of the sustainable harvest calculation that was adopted by the Board of Natural Resources in November 1996. The FY1998 HCP ANNUAL REPORT, discussing the sustainable harvest data information, cautioned that:

> ...It must be remembered that the numbers involved in this process are the results of a modeling process. It is expected that, with more detailed information, improved models, better understanding of limitations of the assumptions used in the modeling, and other data refinements these numbers will be modified in future sustainable harvest modeling efforts… (FY1998 HCP ANNUAL REPORT, P2)

Adaptive Management: The HCP conservation strategies and future appropriate adaptive management changes are anticipated to provide a forest with certain preferred habitat conditions and structures. At this early point in the implementation of this plan, it is reasonable to assume that future scientific research will bring a greater understanding of both species requirements and silviculture techniques and possibilities. The bases of the HCP and the related sustainable harvest modeling reflects the best information that was available in the mid-1990s. However, in hindsight, we will likely discover that we had much to learn about forest habitat development and growth. Future forest conditions will reflect the conservation strategies, as they are adapted over time, subjected to site-specific variables.

Summation of Future Forest Conditions: During FY2001, the Department will update and revise the 1996 sustainable harvest calculation. The new information will more accurately reflect current forest inventory and habitat constraints and requirements. Therefore, the detailed statistics in the FY1999 Future Forest Conditions charts will change in subsequent Annual Reports. The conservation strategies of the HCP are commitments for DNR. Forest structures that result from the conservation strategies will only change as a result of mutual agreements, scientific improvements or through other appropriate mechanisms.

Chap 2: Management Activities

Chapter 2 - MANAGEMENT ACTIVITIES

Background: As discussed in the HCP, forest management activities are categorized as either reportable (significant activities that have the potential to alter habitat) or as non-reportable (activities determined not to have potential to alter habitat). The HCP Annual Report focuses on reportable significant activities, such as timber harvesting, and specific non-timber and road management activities. Significant activities are those that could result in incidental take due to habitat removal or alteration. The definition of "incidental take" includes actions that harass or harm identified wildlife species.

- **Non-incidental take activities**: Many DNR forest management activities do not reach the threshold level of incidental take and therefore, do not require HCP reporting documentation. Generally speaking, unless trees are removed in non-riparian areas, incidental take does not occur as a result of authorized forest management activities. Examples of these "non-incidental take" activities include planting seedlings, pruning brush along trails, gathering forest greens such as salal, thinning young saplings to the appropriate density, or maintaining established recreational sites. Activities in riparian areas are more restricted due to the area's inherent vulnerability to habitat alteration, and are managed according to program-appropriate practices.

- **Incidental take activities**: Timber harvesting involves potential incidental take activity, therefore, HCP restrictions and reporting requirements apply. An example of an activity that does not remove trees but that could cause incidental take is loud equipment noises during breeding season, in close proximity to nesting listed species. This action can lead to incidental take, because breeding is disturbed. Therefore, the HCP restricts certain forest management activities, both harvesting and non-harvesting, in order to minimize both alteration of forest habitats and impacts on forest inhabitants.

Reportable HCP Activities: The HCP Annual Report reviews forest management reportable activities, focusing on three general areas:

- **Timber harvesting and silviculture management**,
- **Authorized non-timber forest management activities**, and
- **Road-related management activities.**

□ Timber Harvest/Silviculture Management Activities:

Under HCP forest management, timber harvesting is frequently performed in locations and with techniques that both produce harvest revenue and restore or enhance forest quality. These forest-management activities include various types of timber harvesting and forest vegetation enhancement:

- timber harvesting (including commercial thinning)
- site preparation
- regeneration
- vegetation management
- pre-commercial thinning/pruning
- fertilization

NOTE: The chart on the following page shows acres completed for each silviculture activity and the HCP planning unit in which the activity occurred. Appendix A presents a brief explanation of these activities and a detailed timber harvesting/silviculture report.

Timber Harvest/Silviculture Management Activities: Summary --- FY1999

Harvest & Silvicultural Activity	Acres of Management Activity by HCP Planning Unit									
	Chelan	Columbia	Klickitat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	Total Acres
Timber Harvest	254	2,268	1,837	3,157	1,920	3,589	1,374	1,228	1,249	**16,876**
Site Preparation	114	150	492	117	58	244	NA	NA	208	**1,383**
Forest Regeneration	114	3,515	502	3,104	1,056	3,113	987	113	285	**12,789**
Vegetation Management	NA	5,058	1,578	19,941	9,622	4,512	6,630	6,041	637	**54,019**
TOTAL	**482**	**10,991**	**4,409**	**26,319**	**12,656**	**11,458**	**8,991**	**7,382**	**2,379**	**85,067**

Timber Harvest/Silviculture Management Activities: Details --- FY1999

Harvest & Silvicultural Activity	Acres of Management Activity by HCP Planning Unit									
	Chelan	Columbia	Klick-itat	North Puget	OESF	South Coast	South Puget	Straits	Yakima	Total Acres
Timber Harvest Type										
Clear cut		1,505	250	2,340	347	3,110	1,058	929	14	**9,553**
Late rotation thinning			51							**51**
Salvage cut					256	45				**301**
Selective product cut		265		244		49	220		399	**1,177**
Shelterwood intermediate						3	52	221		**276**
Shelterwood removal cut			167						121	**288**
Smallwood thinning		498	399	573	1,259	382				**3,111**
Two aged management					58		44	78		**180**
Uneven-aged mangmt	254		970						715	**1,939**
Forest site preparation										
Aerial herbicide		117	145	117		140				**519**
Broadcast burn		33								**33**
Ground herbicide	114		347						208	**669**
Pile and burn					58	104				**162**
Forest regeneration										
Hand planting	114	3,515	502	3,104	1,036	3,113	987	1,113	285	**13,769**
Natural regeneration					20					**20**
Vegetation management										
Aerial herbicide		2,254	1,121			530	27			**3,932**
Ground herbicide		27	457	1,279		502	222	754		**3,241**
Hand cutting		1,165		6,495	1,745	2,057	1,283	186		**12,931**
Other										
Pre-commercial thinning		1,612		8,924	7,862	1,423	904	2,275	637	**23,637**
Tree pruning - Hand				76	15					**91**
Forest fertilization										
Aerial fertilization				2,888			4,194	2,826		**2,888**
Ground fertilization				279						**279**

Source: Planning & Tracking System 9/99

NOTE:
Acreage discrepancies exist between data inventory systems due to data entry schedules. Silviculture includes many forestry activities, ranging from timber harvest methods and subsequent re-forestation efforts to habitat enhancement.

□ Authorized Non-timber Forest Management Activities

Numerous non-timber management activities occur on DNR-managed forest lands. The chart in Chapter 3 identifies all non-timber activities, including both actions that do not result in habitat impacts and those that potentially could alter forest habitat. According to the HCP and Implementation Agreement, the level of impacts to the forest habitat as a result of authorized non-timber activities, is expected to remain consistent over time. Amendment provisions for the HCP apply if impacts increase.

Some of these activities produce revenue for the trust beneficiaries and others benefit citizens and stakeholders, without loss of trust value. These activities include:

- Utility rights-of-way
- Specialized forest products
- Valuable material sales (rock/sand/gravel)
- Prospecting leases/mining contracts
- Oil and gas leases
- Grazing permits/leases
- Communications site leases
- Recreation site construction/reconstruction
- Rural leases

NOTE: The total number of FY1999 program-specific sites/leases/permits are presented in Chapter 3. The Chapter 3 chart compares current year's activity level with the baseline FY1996 year. Explanations of authorized non-timber management activities are presented below. Appendix B discusses potential habitat altering non-timber management activities.

Utility rights-of-way grant permission for utility companies to cross DNR-managed lands with cables, power lines, or pipelines. Large pipeline and power line expansion requests are subject to full environmental and legal review and approval. The trust beneficiaries receive compensation for the granted rights-of-way.

Specialized forest products refers to permits and leases sold for numerous forest-related vegetation activities such as gathering Christmas boughs, florists= materials (ferns and salal), and Christmas tree-growing leases. These activities generate revenue for the trusts and income for individual gatherers while causing no adverse impact to the forest. The Department selectively grants the permits and leases to prevent habitat degradation.

Valuable material sales (rock/sand/gravel) generate income for the trusts, often while providing road-building materials necessary for harvest-related road construction. Any actual excavation and extraction activities are subject to SEPA compliance, National Pollution Discharge Elimination System Permit (NPDES) requirements, Clean Water Act requirements, and Surface Mining Act requirements.

Prospecting leases/mining contracts preclude any actual mineral extraction operations. Prospecting leases allow investigation for locations of mineral deposits. The investigative actions do not alter habitat. A lease is converted to a mining contract if a permittee wants to commence mining operations. All plans for mining operations are granted only with SEPA review and full compliance with HCP commitments and all other mining statutes and restrictions. There are no active mining operations in HCP-managed areas.

Oil and gas leases allow the lessee to explore for underground deposits, usually by conducting underground "echo" testing. The exploratory phase does not alter habitat and is conducted in compliance with HCP commitments. Loud noises are restricted by location and seasonal breeding restrictions. Any active plan of operation completes SEPA review and complies with all other mining statutes. Oil and gas deposits under DNR forests can be accessed from adjacent private properties through new diagonal drilling processes.

Grazing permits are selectively allowed in HCP-managed forests. These activities are allowed if managed in compliance with HCP commitments and as a secondary forest use. Any areas not managed primarily for forestry will be removed from HCP oversight because the HCP is a forest management planning tool.

Communications sites are leased facilities located on higher elevation hilltops. Private and public entities attach equipment to tower structures. A site usually includes a tower and a small un-manned operations facility which houses transmission equipment. This program provides revenue for the trust beneficiaries and communications infrastructure sites for the public. No HCP habitat is altered.

Recreation site construction and reconstruction includes many public use locations and trails in DNR-managed forests. Under terms of the HCP, DNR will try to relocate camp sites currently in stream side locations to higher ground, when practical. Many public use locations are leased by other recreation agencies, under long-term leases. Development of new recreation sites seldom occur. Most HCP relevant recreation site management activities involve replacement of foot bridges in the trail system.

Rural leases are facilities within DNR-managed forests. As an example, the state Corrections Department leases land in several locations for prisons and camps. Any new lease will comply with HCP commitments.

□ Road Management Activities and Operations

Road related management practices are important potential habitat altering activities. Roads activities addressed in the HCP and reported on in this Annual HCP Report include:

- Planning
- Design
- Construction related activities
- Maintenance
- Road use

NOTE: Road planning, design, construction and maintenance are discussed on the following pages. The summary road chart lists total miles and construction-related actions by HCP planning unit. Road maintenance data base information chart, for FY1999 reporting period, is in Appendix C.

Road Planning

Most roads constructed (98%) on DNR-managed lands are built by timber sale purchasers for the purpose of harvesting timber sales. The Department plans, designs, supervises and monitors road building and usage. Road planning efforts during this reporting period focused on minimizing road construction impacts. Minimizing road construction included training on utilization of longer reach yarding systems to minimize ground impacts, including erosion. The Department actively interacts with scholars and consulting experts to ensure that up-to-date technology are incorporated into DNR's road management program. Additionally, the Engineering Division actively trains engineers and foresters in HCP-appropriate road planning techniques.

The following are examples of road planning activities during the FY1999 reporting period:

- Dr. Ed Aulerich, Forest Engineering Inc, developed a training curriculum for an initial training session on Alternative Yarding Systems. The curriculum was based on review of DNR timber sales. Training was presented to 40 engineers and foresters, with participants from all DNR regions. The three-day course covered planning procedures, available cable and ground based systems, feasibility analyses, and methods for evaluating alternatives. Additional sessions are planned.

- Dr. Peter Scheiss, University of Washington College of Forest Resources professor, completed a study on the Ahtanum landscape on the potential for alternative yarding systems. Factors studied included impacts on road densities, sediment production, economics and silvicultural options.

- University of Washington College of Forest Resources completed harvest planning on the Washougal landscape that included a long-span alternative plan.

Road Design

The majority of road design strategies targeted as appropriate for habitat conservation identified in the HCP are standard operating procedures for DNR engineers. Additional refinements in road design quality and construction practices implemented during this reporting period include:

Unstable slopes or fish bearing streams: Roads constructed over these now require design work to be completed or supervised by a licensed Professional Engineer. Some of these designs were previously developed by experienced engineering technicians.

Fish passage design: DNR contracted with US Geologic Services Water Resources Division in April 1999 to develop methods for estimating fish passage flows on eastside HCP-managed lands, as well as non-HCP eastside lands. This contract is the basis for both new culvert designs and fish passage inventory and assessment efforts scheduled to begin in FY1999.

.

DNR Roads Handbook: Development began in early 1999. During the FY1999 reporting period, draft procedures and standards for road designs on unstable slopes and culverts in live streams were developed. These procedures and standards, as well as others, implement HCP appropriate habitat conservation commitments. The May 1999 Natural Resources Engineering training session discussed HCP-relevant road planning efforts.

Sedimentation control: The Engineering training session in May included extensive presentation and information on design of control measures during road construction.

Construction Related Road Management Activities

CONSTRUCTION---RECONSTRUCTION----DECOMMISSIONING---CULVERT REPAIR										
HCP Planning Units										
Miles of Activities	**Chelan**	**Columbia**	**Klickitat**	**North Puget**	**OESF**	**South Coast**	**South Puget**	**Straits**	**Yakima**	**Total Miles**
Construction	0	31	5	27	5	59	8	10	8	**153**
Reconstruction	0	23	9	51	20	135	20	10	7	**275**
Decommissioning	0	17	1	87	1	22	26	1	1	**156**
Culverts -- fish barrier repairs	0	0	0	0	7	0	0	0	1	**8**

Construction generally consists of some or all of the following activities: clearing, grubbing, debris disposal, excavation, embankment, installation of drainage structures, manufacture and application of surfacing material and installation of sedimentation control measures.

Reconstruction generally consists of activities listed above for construction, but to a lesser degree. In particular, excavation and embankment quantities are minimal.

Decommissioning consists of activities required to put roads in the following state: no culverts or fills left in live stream crossings, drainage provided for in a manner that not requiring regular maintenance, goal of making the road impassable to all vehicles. In many cases, Forest Practices administrative procedures are pursued to designate these roads as abandoned

Culverts are water-crossing structures with earth over the top.

Future Road Reporting Activities

Phased planning and implementation of new HCP and Forest Practices Act road management activities are continuing. These will be reported in the HCP ANNUAL REPORT as data is gathered.

No road relocations were completed in FY99, however, it is anticipated that this will occur in FY2000. Road relocations include moving roads that were built next to streams decades ago. New road locations are in upland areas away from stream banks.

Road Maintenance & Abandonment Plans are in development, and will be reported in future Annual Reports.

Road Maintenance

Current HCP Planning Activities: Road maintenance of the Department's road system is done through various entities, including DNR region engineering staff and timber contract purchasers. Historically, each management activity is planned and completed according to the Department's Road Standards, with no centralized road maintenance activity data collection system. The initial phase of implementing the HCP road management commitment has seen the creation and development of what will become an extensive roads inventory and activities reporting system for the 1.6 million acres of the HCP-managed lands. The completed data system will facilitate streamlined, complete tracking and reporting of road maintenance activities in subsequent decades of the HCP. This is currently a time-consuming and complex endeavor in which the Engineering Division has made significant strides.

At this point, road maintenance activities cannot be statistically reported through a unified reporting system. All road maintenance is conducted by trained personnel operating under the Department's Road Standards and in compliance with all applicable Forest Practices road maintenance procedures.

Future HCP Planning Activities: Development of the Road Data Management System (RDMS) is proceeding as planned. This inventory collection program is currently in development, and therefore, is subject to anticipated additions and changes. Over time, the RDMS system will include the baseline road data information and can be updated as maintenance activities occur in the field. Subsequent reporting periods will include both additional data categories and will report maintenance activities conducted during the reporting period. The HCP Planning Unit Road Maintenance Data Base Chart, presented in Appendix C, represents information in the RDMS as of June 30, 1999.

Chap 3: ’99 vs. ’96 Non-Timber

Chapter 3 - EVALUATION of Potential Non-Timber Impacts vs.1996 Baseline Level

Non-Timber Resources Activity Comparison		
Activity	1996 Base Year	FY1999
Utility Rights-of-Way (1)	9 R/Ws over 3.3 miles	No significant R/W activity
Specialized Forest Products(2)	* 360 Western green leases/permits on 135,000 acres; * 14 Xmas green sales/leases/permits on 5,000 acres; * 8 Xmas tree leases on 409 acres; * 20 misc. medicinal, cone and transplant sales/permits.	* 331 Western green leases/permits on 135,000 acres; * 57 Xmas green sales/leases/permits on 10,000 acres; (2) * 8 Xmas tree leases on 409 acres; * 10 misc. medicinal, cone and transplant sales/permits.
Valuable Material Sales (3)	28 pits on 281 acres; 17 sales involving 222 acres; 25 direct sales on 50 acres.	24 pits on 360 acres; 24 sales involving 360 acres; 34 direct sales on 55.5 acres.
Prospecting Leases/Mining Contracts	4 leases on 360 acres; 15 contracts on 3,650 acres; None active.	3 leases on 249 acres; 14 contracts on 3,570 acres; None active.
Oil and Gas Leases (4)	43 leases on 13,196 acres; 1 active sale.	16 leases on 4,412 acres*****; None active.
Grazing Permits/Leases (5)	Eastside B 25 on 105,980 ac. Westside--15 on 1,074 acres.	Eastside B 25 on 105,980 acres WestsideB11 on 640 acres.
Communications Site Lease	56 sites with 288 leases.	60 sites with 302 leases.
Recreational Sites	119 sites on 2,456 acres.	126 sites on 1,934 acres.
Rural Leases	90 leases on 5,792 acres	92 leases on 5,870 acres

NOTES:

(1) Approximately 3,625 Right-of-Way (R/W) easements have been granted since statehood. This includes both utility and road R/W. Approximately 12% of the leases are for utility R/W, i.e. approximately 435 leases. Road R/W data is inventoried in the road management system.

(2) The increase in Xmas greens is due to an increase in seasonal permits, primarily during November. These permits are granted only for sites where no significant impacts could occur to the habitat. Region management determines the number of permits granted to a site, therefore, the FY2000 level of impacts did not increase from the 1996 *de minimus* level.

(3) Valuable materials sales (sand/gravel/rock) increased in total acreage but that includes acres not used for active extraction. Activity was re-distributed on the sites; the level of impacts did not increase.

(4) Oil and gas leases can vary significantly in number from year to year due to market influences.

(5) Grazing permits/leases are grazing activities which are a secondary use in forested woodlands. The HCP does not apply to agricultural management leases, nor to grazing activities that are the primary land use activity.

(6) The change in number of recreational sites and decrease in acreage reflects data and inventory refinements

Chap 4: Monitoring, Implementation

Chapter 4: IMPLEMENTATION MONITORING---FY1999

Monitoring is a critical aspect of any new management system. The Habitat Conservation Plan is a new system of conservation strategies implemented in a working forest. The conservation strategies are products of research and monitoring efforts, and are subject to adaptive management changes as a result of subsequent research and monitoring. Monitoring efforts include three programs:

- Implementation Monitoring --- answers the question, "did we implement the HCP".
- Effectiveness Monitoring --- answers "do implemented activities produce results".
- Validation Monitoring --- answers "do results effect species as expected".

The Implementation Monitoring plan is required by the HCP, prior to implementation of the HCP. The plan was approved by the Services in the first HCP ANNUAL REPORT to the SERVICES for January 1997 to June 30, 1998. According to agreements with the Services, HCP commitments are effective on new forest management agreements and activities beginning January 1999, therefore, the Implementation Monitoring Plan was required prior to that date.

The DNR/HCP Implementation Monitoring Plan requires that specific timber and non-timber management activities that could significantly alter specific habitats are reviewed by management, are appropriately mitigated according to HCP habitat conservation strategies and are implemented correctly. The implementation monitoring program involves a sample review of planned and completed HCP management activities.

FY1999Results:

Only a small number of HCP activities were approved after January 1, 1999 with implementation completed before June 30, 1999. Therefore, very few forest management activities required HCP monitoring in this reporting period. The following review of timber and non-timber activities includes the results of implementation monitoring for FY1999

Summary of timber sales:

Planned sales: timber sales are habitat altering activities, therefore, implementation documentation of HCP compliance was required for sales after January 1, 1999.

- Planned sales during this period included HCP commitments, and
- each sale was reviewed and approved by region management for HCP compliance, and
- each was further evaluated by the Division Product Sales team before approved for sale.

Sold sales: All timber sales sold after January 1, 1999 complied with HCP agreements. Those sold from January through June 1999 were reviewed for HCP compliance by region management and by Forest Resources Division staff. Each active sale is monitored for compliance by a timber sale officer, who field reviews every active sale at least once a month.

Harvested sales: No post-harvest implementation compliance monitoring was conducted since no HCP-compliant timber sales completed harvest by June 30, 1999. The HCP/Services Annual HCP Report in future years will include implementation monitoring results of harvest activities completed in the reporting period.

Summary of Non-timber Resources: FY1999 activities did not increase the level of impacts that were identified by the Services in 1996 as the *de minimus*, or baseline, level:

- Floral greens' permits and acreage increased, however the level of impacts to the habitat did not increase since the density of permits to acreage was appropriate to each site and consistent with permitting on other region parcels,

- Valuable materials sales (sand/gravel/rock) increased in total acreage but that includes acres not used for active extraction. Activity was re-distributed on the sites; the level of impacts did not increase,

- No new plans of operations were activated for mineral extraction or oil/gas leasing,

- No new communication sites were developed,

- Recreational sites remained the same; the change in number and decrease in acreage reflects data and inventory refinements.

During FY2000, DNR will complete development of the non-timber implementation monitoring program and conduct staff training on documentation of HCP non-timber management activities. The Department anticipates an expanded compliance monitoring report as more forest management activities occur under the fully implemented HCP.

Chap 5: Monitoring, Effectiveness & Research

Chapter 5: MONITORING & RESEARCH

EFFECTIVENESS MONITORING and RESEARCH PLAN--- FY1999

Both the Effectiveness Monitoring Plan and the Research Plan are currently in development. Research plans and effectiveness monitoring plans are related to HCP implementation activities, as well as to other scientific efforts. As more forest management activities are implemented in compliance with HCP commitments, habitat research and effectiveness monitoring will likely broaden in scope. The Department is actively involved with other agencies, academics, and private interests in sharing scientific knowledge and expertise.

□ **Marbled Murrelet --- Update**

Identification of the habitat and recovery needs of this endangered seabird is difficult to research and monitor since it is a small seabird, with behavior patterns that complicate detection. Marbled murrelets nest in large tall trees, are active during early morning darkness and can fly at speeds of 30 miles per hour.

Long-term conservation strategies for the marbled murrelets are dependent on further research of forest habitat requirements. During the interim period, the Department is deferring timber harvest in areas judged as potential habitat. When surveying is completed, some areas will be released for harvest.

FY1999 Results:

Initial surveys indicate that murrelet habitat acreage on DNR-managed lands is higher than previously estimated. The range of this species is approximately 50 miles inland from saltwater. Coastline forests of the Pacific, Straits and Puget Sound are potential marbled murrelet habitat. Surveys are continuing.

□ **Spotted Owl --- Update**

The habitat criteria identified in the HCP for both Nesting, Roosting and Foraging (NRF) habitat and dispersal habitat are more easily identified than are those of the murrelet. Effectiveness monitoring and further scientific research may result in appropriate modification of current criteria.

FY1999 Results:

The Department is actively studying forest harvest techniques that can hasten the creation of the older forest qualities that spotted owls need. It is anticipated that various silvicultural techniques can decrease the amount of time necessary for lands to develop into NRF habitat.

□ **Riparian Conservation Strategy --- Update**

Historic logging operations in the Pacific Northwest caused extreme damage to streams and stream banks. Riparian areas, used as transportation corridors, were some of the first areas to be logged. Several salmon species originally inhabiting these areas are extinct or on the endangered species list.

DNR's HCP is one of a few in the country that includes multi-species coverage. DNR-managed forest lands west of the Cascade crest have ITP coverage under the HCP for forest management activities in riparian areas. Consistent with HCP agreements, DNR and the Services are currently cooperating on development of riparian guidelines.

FY1999 Results:

A riparian committee composed of interagency specialists, academic and tribal representatives are working to develop objectives, guidelines and goals to provide guidance for enhancement and restoration of riparian zones. The specific guidelines for riparian management procedures are anticipated for completion during FY2001. Timber harvesting in riparian areas is deferred until the guidelines are developed and approved.

VALIDATION MONITORING --- FY1999

Update:

Validation monitoring evaluates cause-and-effect relationships between habitat conditions resulting from implementation of the conservation strategies and the species these strategies are intended to benefit. Planning for validation monitoring is proceeding, and will focus on the Olympic Experimental State Forest planning unit. Planning includes documenting spotted owl and marbled murrelet use of areas managed to provide nesting habitat, and salmonid use of streams crossing DNR-managed lands. Results of validation
monitoring are anticipated at least several years into the future.

Chap 6: Transactions

Chapter 6: LAND BASE CHANGES ---Transactions

The land base covered by the HCP recorded at the time of signature of the agreement is dynamic. Lands covered by the HCP and subject to the incidental take permit can be added or deleted from the HCP for a variety of reasons and by several mechanisms. The mechanisms include land sales, exchanges, transfers and purchases.

The most common reasons for lands to be removed from the land base are:

- Repositioning of trust assets through sale, transfer or exchange,

- Change of use, such as forest to agriculture or commercial,

- Removal from the HCP land base due to adjustments caused by reconciliation of actual uses versus those incorrectly documented at the time the HCP was signed. Removal of agricultural lands from the HCP forest land base is a prime example. Removals of this type will decrease over time.

The data presented in Appendix D enumerates the number of acres, by HCP planning units, that were acquired or disposed of due to transactions during this reporting period.

The data presented in Appendix D also identifies the total cumulative acreage changes due to transactions that have occurred in each HCP planning unit since January 1, 1999.

The data presented in Appendix D also includes a series of maps of each HCP planning unit, illustrating the lands “in-coming” and “out-going” to the HCP land base for FY1999. Details of each transaction are included in the appendix.

Historical Agreements

Attachment 1: **HISTORICAL SUMMARY of REPORTING AGREEMENTS, FY1999 and 1997-1998**

OVERVIEW:
The Implementation Agreement (IA) for the Washington State Department of Natural Resources' (DNR) Habitat Conservation Plan (HCP) was formally entered into by DNR and the federal services involved the U. S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) at a signing ceremony held on January 30, 1997. The IA describes various reports required from DNR to the federal services, including an annual summary report of management activities conducted, an annual report on land transaction activities, an evaluation of non-timber activities compared to the level of those activities conducted in 1996 (recognized in the HCP as a *de minimis* level), and a schedule for these reports. The IA recognizes that the schedule for these reports can be modified with agreement of the three parties (DNR, USFWS and NMFS).

REPORTING AGREEMENTS, as of FY1998
Combined Report: Negotiations between the Department and the Services during the July 1997 to June 1998 period resulted in agreements regarding the format and timing of reporting requirements identified in the Implementation Agreement. The result of those negotiations is the combined Annual Report to the Services, which is based on the Department=s fiscal year, July 1 to June 30. The revised schedule differs from that described in the IA in that:

- all the required reports will be combined into a single Annual Report,
- the reporting period for each Annual Report will coincide with DNR's fiscal year,
- the combined Annual Report will be provided to the federal services each October, or earlier.

Reporting Schedule: It took a substantial period of time for DNR and the Services to mutually agree on format and contents for the first Annual HCP Report to the Services, for the period January 1997 through June 1998. The first approved Annual HCP Report was completed well after the anticipated reporting date of October1998. DNR and the Services agreed that reporting format and content changes in future HCP Annual Reports will likely prevent completion by October, following the end of DNR's fiscal year.

REPORTING AGREEMENTS, as of FY1999 Annual Report
The HCP Annual Report to the Services for FY1999 builds on reporting agreements regarding format and contents that were reached during the initial reporting period. During calendar year 1999, the Department and the Services continued to collaborate on data presentations, focusing on developing appropriate and efficient reporting systems. Information needs, presentation format and chapter headings for the Annual Report were agreed upon during regularly scheduled meetings.

Report Format: During the August 1999 meeting, the Services requested and DNR agreed that:

- ❒ Data presentation is both in enumerations, as in FY1998 Report, and in summary charts, and
- ❒ transactions maps showing acres moved out of HCP and acres acquired in HCP are included,

- ❒ future Reports will not reprint the Implementation Monitoring plan. The Annual Report will present monitoring results and changes to the Implementation Monitoring plan. The Implementation Monitoring Plan, in the FY1998 Annual Report, was approved by the Services.

[Cont. Attachment 1: HISTORICAL SUMMARY of REPORTING AGREEMENTS]

Report Date: In October 1999, both DNR and the Services agreed the October target completion date for the Annual Report was not feasible, due to fiscal year-end data gathering and reporting schedules for DNR systems. It was agreed that the Annual Report will require considerable time for documentation, completion and mutual approval during the start-up years of the HCP.

Annual Report Schedule Change: Developing and internally approving the first HCP Annual Report took a significant period of time for several reasons. These reasons include staff vacations, fire season, data reporting schedules in the regions and divisions, and the time for developing narrative for a Department-wide publication. Completing the initial report took over a year even though the HCP compliance requirements applied to only half the fiscal year, beginning January 1999, and the report was quite simple. A refinement of the reporting process was suggested and agreed to as a solution to both the Services' need to have the year-end data in a timely manner, and the Department's inherent difficulties completing and producing a significant publication. The HCP ANNUAL REPORT explains to DNR stakeholders, and preserves for the record, the complexities of each fiscal year's HCP activities.

New Format for FY1999: The HCP Annual Report for FY1999 reflects review by the Services of the draft FY1999 data and summary charts. The completed HCP ANNUAL REPORT with DATA & DOCUMENTATION volume contains narratives, summary charts and the supporting statistical enumerations of reportable data identified in the HCP and the Implementation Agreement. This document reflects negotiated reporting format, content and chapter headings.

Annual Report Format and Schedules: The basic data reporting requirements and summary charts that the Services need can be produced, under normal circumstances, for the Annual Meeting that occurs in late November or early December. At this meeting the parties review all of the year's activities. Subsequently, DNR can develop the narrative presentations that explain the HCP data for stakeholders, including the Legislature. The Department's intent is to produce a narrative summary version for general publication, and an expanded complete report that includes data, documentation, summaries and narratives. The parties agreed at the Annual Meeting on November 17, 1999, that this approach is a practical solution for resolving inherent reporting time constraints and complexities.

Summarizing, the Services receive the fiscal year data summary charts and required statistical enumerations at the Annual Meeting. Later, the Department adds both the narrative explaining the data for the lay audience, and develops a summary report of the year's HCP activities and accomplishments. The completed HCP ANNUAL REPORT with DATA & DOCUMENTATION volume contains all HCP reporting materials for the fiscal year. A summary version of the HCP ANNUAL REPORT contains summary charts and narrative developed for a lay audience. This approach is subject to change.

Specifically, the HCP ANNUAL REPORT with DATA & DOCUMENTATION for FY1999 includes:

Chapter 1--- Information on DNR's management planning objectives under the HCP,
Chapter 2--- Identification of timber, non-timber, and road-related management activities,
Chapter 3--- Evaluation of non-timber activities compared to the 1996 baseline,
Chapter 4--- Updates on HCP implementation and compliance monitoring,

(Cont. Attachment 1: HISTORICAL SUMMARY of REPORTING AGREEMENTS)

Chapter 5 --- Progress reports on development and implementation of effectiveness and validation monitoring, and the research plan,
Chapter 6 --- Land base: information regarding changes/corrections to the HCP land base.

Attachment I--- History of Reporting Agreements
Attachment II --- Notable Documents for the Reporting Period

APPENDIX A: Silviculture/harvest activities data
APPENDIX B: Significant non-timber activities data
APPENDIX C: Road management activities data
APPENDIX D: Land data, Transactions data
APPENDIX E: FY1999 and Decadal forest structure/age class projections

Future Forest Conditions: The HCP ANNUAL REPORT with DATA & DOCUMENTATION for FY1999 includes charts identifying age-class inventory for each region and for the Olympic Experimental State Forest. These charts also detail the results of the sustainable harvest calculation that was adopted by the Board of Natural Resources in November 1996. The ANNUAL REPORT for FY1998, discussing the sustainable harvest output, cautioned that:

> ...It must be remembered that the numbers involved in this process are the results of a modeling process. It is expected that, with more detailed information, improved models, better understanding of limitations of the assumptions used in the modeling, and other data refinements these numbers will be modified in future sustainable harvest modeling efforts.. (FY1998 HCP ANNUAL REPORT, P 2).

During FY2001, the Department will update and revise the 1996 sustainable harvest calculation. The new information will more accurately reflect current forest inventory and habitat constraints and requirements. Therefore, the detailed statistics in the FY1999 Future Forest Conditions charts will change in subsequent Annual Reports. The conservation strategies of the HCP are commitments for DNR. The forest structures that result from the conservation strategies will only change as a result of mutual agreements, scientific improvements or through other appropriate mechanisms.

Adaptive Management Activities: This chapter will be added to the ANNUAL REPORT, as agreed upon with the Services at the August 1999 quarterly meeting. There are no adaptive management activities identified for FY1999. Adaptive management activities are anticipated for the FY2000 reporting period.

Written agreements and significant documents: Documents developed between the parties, and other documents significant to the HCP developed during the reporting period will be attached to the HCP ANNUAL REPORT with DATA & DOCUMENTATION for FY1999. The complete HCP ANNUAL REPORT with DATA & DOCUMENTATION for FY1999 will be filed with the Services, and available for review in Olympia and each Region office.